

Response dated: December 6, 2006
Appln. No. 10/658,499; Filed: September 9, 2003
Reply to Restriction Requirement of November 6, 2006

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Amendments to the Claims:

1. (original) A prosthesis to replace all or a portion of a caudal portion of a natural facet joint on a vertebral body comprising a prosthesis body accommodating fixation to the vertebral body at or near a pedicle and without support by a lamina, and an artificial facet joint structure carried by the prosthesis body adapted and configured to replace all or a portion of a caudal portion of a natural facet joint.
2. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint.
3. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least some of a lamina from the vertebral body.
4. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least part of a mamillary process from the vertebral body.
5. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least part of a transverse process from the vertebral body.
6. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least part of a pedicle from the vertebral body.
7. (original) A prosthesis according to claim 1 wherein the artificial facet joint

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structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least some of the natural articular process from the vertebral body.

8. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least some of the natural articular process and of at least some of a lamina from the vertebral body.

9. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least some of the natural articular process and of at least some of a mamillary process from the vertebral body.

10. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least some of the natural articular process and of at least part of a transverse process from the vertebral body.

11. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least some of the natural articular process and of at least part of a pedicle from the vertebral body.

12. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and wherein the prosthesis body is adapted and configured to replace at least some of a lamina of the vertebral body.

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13. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and wherein the prosthesis body is adapted and configured to replace at least some of a mamillary process of the vertebral body.

14. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and wherein the prosthesis body is adapted and configured to replace at least some of a pedicle of the vertebral body.

15. (original) A prosthesis according to claim 1 wherein the prosthesis body is adapted and configured to replace at least some of a lamina of the vertebral body.

16. (original) A prosthesis according to claim 1 wherein the prosthesis body is adapted and configured to replace at least some of a mamillary process of the vertebral body.

17. (original) A prosthesis according to claim 1 wherein the prosthesis body is adapted and configured to replace at least some of a pedicle of the vertebral body.

18. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is adapted and configured to articulate with a cephalad portion of a facet joint of an adjoining vertebral body.

19. (original) A prosthesis according to claim 1 wherein the artificial facet joint structure is made of at least one selected prosthetic material.

20. (original) A prosthesis according to claim 1 wherein the selected prosthetic material includes polyethylene, rubber, tantalum, titanium, chrome cobalt, surgical steel, bony in-growth material, ceramic, artificial bone, or a combination thereof.

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21. (withdrawn) A method of replacing, on a vertebral body, all or a portion of a caudal portion of a natural facet joint using the prosthesis defined in claim 1 to provide improved support for the spinal column, the method comprising the steps of (i) removing all or a portion of a natural articular process of the caudal portion of the natural facet joint from the vertebral body, and (ii) fixing the prosthesis as defined in claim 1 to the vertebral body to replace the removed portion of the natural articular process with the artificial facet joint structure.

22. (withdrawn) A method according to claim 21 further including a step of removing at least some of the lamina from the vertebral body.

23. (withdrawn) A method according to claim 21 further including a step of removing at least part of a mamillary process from the vertebral body.

24. (withdrawn) A method according to claim 21 further including a step of removing at least part of a transverse process from the vertebral body.

25. (withdrawn) A method according to claim 21 further including a step of removing at least part of a pedicle from the vertebral body